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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/736,155

12/15/2003

Ronald D. Hatfield

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05/21/2009

USDA-ARS-OFFICE OF TECHNOLOGY TRANSFER  
NATIONAL CTR FOR AGRICULTURAL UTILIZATION RESEARCH  
1815 N. UNIVERSITY STREET  
PEORIA, IL 61604

EXAMINER

PRYOR, ALTON NATHANIEL

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

05/21/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/736,155	<b>Applicant(s)</b> HATFIELD ET AL.	
	<b>Examiner</b> ALTON N. PRYOR	<b>Art Unit</b> 1616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,7,8,10,11,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,10, 11,13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Applicant's arguments filed 2/12/09 have been fully considered but they are not persuasive. Rejections not addressed below are withdrawn.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5,7,8,10, 11,13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myers et al. (USAN 20030044448; 3/6/03) and Asrar et al. (USAN 20040259732; 12/23/04). Myers et al. teach a method of preserving a grain product comprising applying to a grain product a composition comprising antioxidants such as rosemary extract. Myers et al. teach a method of treating wet grains that have been stored in a silage bag with the antioxidant composition (paragraph 43). The rosemary extract comprises antioxidants such as rosmarinic acid (o-diphenol compound). See abstract. Myers et al. do not teach the method comprising polyphenol oxidase. However, Asrar et al. teach a method of treating plant materials with a composition comprising antioxidants (abstract, paragraphs 48-49). Asrar et al. teach the method comprising polyphenol oxidase (PPO), an antioxidant (paragraphs 58,66). It would have been obvious to one having ordinary skill in the art to modify the invention of Myers et al. to include the PPO taught by Asrar et al. One would have been motivated to do this since Myers et al. teach the use of antioxidants such as rosmarinic acid (rosemary

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extract) to preserve grain. Since Myers et al. use antioxidants for the preservation process, it would have been obvious to include additional antioxidants such as the PPO taught by Asrar et al to arrive at an invention comprising rosmarinic acid (o-diphenol) and PPO.

*Response Applicants' argument*

Applicants argue that neither Myers et al. nor Asrar et al are related to silage or ensiling (livestock feed produced from harvested crops) as recited in instant claims. Myers et al. are to a method of preserving wet agricultural byproducts like wet corn gluten feed and dried distiller grains which none of these material are silage or ensiled crops. The Examiner argues that Myers et al. teach a method of applying to harvested crop (which happens to be wet) a composition comprising an antioxidant and rosmarinic acid (o-diphenol compound) in order to preserve the harvested crop. In addition, Myers et al. suggest that the harvested materials may be place in silage bags for storage as acknowledge by the Applicants. The Examiner argues that in the absence of unexpected results, it would have been obvious to try treating dry harvested crop with rosmarinic acid and the antioxidant with the expectation that the dry crop too would have been preserved.

Applicants argue that Asrar et al. are drawn to a method of improving the health of growing plants or seeds growing into plants, whereas, silage recited in the present claims is harvested materials used to produce animal feed. Although the Asrar et al. teach many antioxidants including PPO, the Examiner argues that PPOs are well know

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antioxidants and that Asrar et al. are used to merely for the teaching that PPO is an antioxidant.

Note, Myers et al. teach the combination of rosmarinic acid and an antioxidant used in a method to preserve harvested crops. Asrar et al. define PPO as an antioxidant. Therefore, it would have been obvious to use PPO taught by Myers et al. in conjunction with rosmarinic acid taught by Asrar et al.

Since the active step in both Myers et al (in conjunction with Asrar et al.) and instant claims involve applying to harvested crop rosmarinic acid plus an antioxidant (PPO), it is obvious/inherent that both inventions would reduce proteolysis in the harvested plants as well as preserve the crop.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Telephonic Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALTON N. PRYOR whose telephone number is (571)272-0621. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alton N. Pryor/  
Primary Examiner, Art Unit 1616